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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SAUNDERS, DAVID A	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,335	PILLARISETTI ET AL.	
	Examiner	Art Unit	
	David A. Saunders, PhD	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 March 2006 and 15 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,10-14 and 27-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,10-14 and 27-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/20/06 has been entered.

Amendment of 3/20/06 has been entered. Claims 1-5, 10-14 and 27-39 are pending. Claims 1-5, 10-14 and 27-39 are under examination. The amendment has entered no new matter.

The amendment has overcome previously stated issues as follows:

The objection to claims 1 and 27.

The rejection of claims 10-14 under 35 USC 112, 2nd paragraph.

The rejection of claims 1-6, 10-14 and 27-34 under 35 USC 112, 1st paragraph.

The rejection of claims 10-14 under 35 USC 112, 1st paragraph.

The prior art rejection under 35 USC 102 over Medford et al.

The following corrections pertain to the previous Office action:

At page 3, 3rd para., line 5 "14" should have read as --10--.

At page 4, 2nd full para., line 11 "Claims and 27" should have read as –Claims 1 and 27--.

The following rejections of record are maintained or modified as follows:

Claims 1-2, 4-5, and 38-39 are rejected under 35 U.S.C. 103(a) as obvious over Medford et al (5,846,959) in view of Cahoon et al (6,900,041, newly cited)

Medford et al teach methods in which HAECs or HUVECs are treated with a stimulatory agent. The stimulatory agent can be a polyunsaturated fatty acid (PUFA) or the hydroperoxide (ox-PUFA) derivative thereof. The stimulatory agent can also be TNF-alpha. Following such stimulation the treated cells show increased cell surface expression of VCAM-1 as a determinant of inflammation. Prior treatment of the stimulated cells with a dithiocarbamate/dithiocarboxylate, such as PDTC, can inhibit the effect of the stimulatory agent. See, for example, col. 13, lines 25-42; col. 21, lines 15-28; col. 23, line 62-col. 24, line 54. With respect to the instant claim

limitation that the component of step a) has "an unknown effect upon inflammation", note that Medford et al teach that the effects of particular dithiocarbamate/dithiocarboxylate compounds should be evaluated with respect to their ability to affect VCAM-1 expression; see col. 15, lines 40-60 and col.19, lines 53-65. Medford et al thus teach all aspects of instant claims 1 and 38, except that they pretreat the cells with a dithiocarbamate/dithiocarboxylate compound (corresponding to the instant "component with an unknown effect"), prior to adding the stimulatory agent, whereas applicant adds the stimulatory agent prior to or simultaneously with the addition of the compound/component with an unknown effect. Cahoon et al (see further explanation infra, under the 102(e) rejection) however show (col. 9, lines 6-9) that the test compound/component and the stimulatory agent can be added to the culture in either order or simultaneously. Thus the recited order of addition in instant claims 1 and 38 offers no patentable distinction over Medford et al.

Dependent claims 2, 5 and 39 are rejected because VCAM-1 is an adhesion molecule.

Dependent claim 4 is rejected because any dithiocarbamate/ dithiocarboxylate of the reference is a "compound" or a "molecule" or a "pharmacological agent" (e.g. col. 15, lines 38-col. 16, line 49).

Applicant's arguments with respect to claims 1-2, 4-5 and 38-39 have been considered but are moot in view of the new ground(s) of rejection.

The following are new ground(s) of rejection.

Claims 19 and 31-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 29 it is unclear how the inflammation induces any of the recited disease states; since the method of detecting merely involves use of a culture comprising endothelial cells, there would not be any way in which any of the recited conditions would arise in the culture.

Claim 31 is unclear as to whether it is a method or a composition claim. It is believed that applicant intends to commence with –The method of Claim 27...--.

In claim 32 "the stimulatory agent" lacks antecedent basis in claim 27.

Claims 2-3, 30 and 36are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for detecting VCAM-1, MCP-1 or IL-6 as a "determinant of inflammation" produced by endothelial cells, does not reasonably provide enablement for detecting any of other recited "determinant of inflammation". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. All independent claims are limited to the use of endothelial cells. Dependent claims 2-3, 30 and 36 recite numerous determinants that would not be produced by the endothelial cells used in the instant screening method. For example, dependent claim 3 recites "TNF-α" which is not produced by endothelial cells; see Cruse et al at page 302 teaching its production by macrophages. Since applicant has exemplified production of MCP-1 and IL-6 by endothelial cells and since the prior art teaches production of VCAM-1 by endothelial cells, it is taken that these are the only "determinants of inflammation" that are, in fact, produced by endothelial cells. Since the Markush groups of claims 2-3, 30 and 36 are unreasonably large, the office does not have the resources to determine what may be the cell types that produce the other recited determinants; if applicant traverses, he must show that each of the recited "determinants of inflammation" is capable of being produced by endothelial cells or otherwise cancel the Markush group members that are not so produced.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 10-14 and 27-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Cahoon et al (6,900,041).

The Cahoon et al reference has a different inventive entity and is thus properly cited.

Cahoon et al teach the screening for compounds that effects/up-regulates the activity of the GSK-3B protein. They employ two endothelial cell cultures as instantly. An inflammatory molecule, such as TNF-alpha or an AGE product(e.g. glycated HSA) is added to each of two cultures (note various orders of addition disclosed at col. 9, lines 6-9). A test compound is then added to the first of the cultures. Cahoon et al then measure the amount of a "determinant of GSK-3B" in the two cultures; they the compare the amounts of the determinant produced in the two cultures, in order to determine if the test compound effects/up-regulates the activity of GSK-3B protein. The disclosed and claimed invention of Cahoon et al is inherently the same as that instantly, since both measure the same determinants (e.g. VCAM-1, MCP-1 or IL-6), and since what would effect/up-regulate the activity of GSK-3B would affect/inhibit NF-kB mediated inflammatory gene expression; see col. 4, line 26-col. 5, line 21, for example. Whether one designates VCAM-1, MCP-1 or IL-6 as "determinant of GSK-3B" (as in Cahoon et al) or as a "determinant of inflammation (as instantly) is irrelevant; they are all still the same molecules, irrespective of what one calls them. Instant claims 1-5, 10-14 and 27-39 are thus anticipated.

Claims 1-5, 10-14 and 27-39 are rejected under 35 U.S.C. 102(f) or (g) because the applicant did not invent the claimed subject matter. See rejection over Cahoon et al above for evidence.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5, 10-14 and 27-39 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 7 and 10-16 of U.S. Patent No. 6,900,041. Although the conflicting claims are not identical, they are not patentably distinct from each other because although the claims differ in wording they are claiming at identifying compounds having the same effect, since what would effect/up-regulate the activity of GSK-3B would affect/inhibit NF-kB mediated inflammatory gene expression. The language in the issued claims concerning CSK-3B merely refers to a protein which is mechanistically involved in NF-kB mediated inflammatory gene expression. Recitation of affecting a protein whose activity underlies the same outcome of inflammatory gene expression does not render the issued claims patentably distinct from those instantly pending.

Claims 1-5, 10-14 and 27-39 are directed to an invention not patentably distinct from claims 1-5, 7 and 10-16 of commonly assigned Pat No. 6,900,041. Specifically, see reasons stated supra in the obviousness type double patenting rejection.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned Pat. No. 6,900,041, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly

assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Saunders, PhD whose telephone number is 571-272-0849. The examiner can normally be reached on Mon.-Thu. from 8:00 am to 5:30 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan, can be reached on 571-272-0841. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Typed 7/23/06 DAS

David A Saunders

DAVID SAUNDERS
PRIMARY EXAMINER
ART UNIT 1644